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EXAMINER

PESIN, BORIS M

ART UNIT PAPER NUMBER

2174

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/966,131

Applicant(s)

SEETHARAMAN ET AL.

Examiner

Boris Pesin

Art Unit

2174

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. This communication is responsive to Amendment A, filed 10/27/2004.
2. Claims 1, 3-17 are pending in this application. Claims 1, 7, and 13 are independent claims. In the Amendment A, Claims 1, 7, and 13 were amended. Claim 2 was canceled, and claims 14-17 were added as new. This action is made Non-Final.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-12 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Bowman-Amuah (US 6636424).

In regards to claim 1, Bowman-Amuah teaches a computer software system comprising: a view sub-system including presentation objects which provide a user interface (i.e. Figure 42, "User Interface Component"); a business logic sub-system including business object implementation objects which hold business data objects and implement business functions (i.e. "*Business Logic is the core of any application, providing the expression of business rules and procedures (e.g., the steps and rules*

*that govern how a sales order is fulfilled). As such, the Business Logic includes the control structure that specifies the flow for processing business events and user requests. There are many ways in which to organize Business Logic, including: rules-based, object-oriented, components, structured programming, etc. however each of these techniques include, although perhaps not by name, the concepts of: Interface, Application Logic, and Data Abstraction. FIG. 33 depicts the various components of the Business Logic portion of the Netcentric Architecture Framework."* Column 119, Line 53); a handler sub-system including controller objects which control a sequence of actions by the business logic sub-system in a use case, in response to an event triggered by the view sub-system(i.e. *"FIG. 158 illustrates a flowchart for a method 15800 for controlling data. A data retrieval mechanism is provided in operation 15802 for retrieving data from a database. The data retrieval mechanism also writes data to the database. In operation 15804, the data retrieval mechanism is encapsulated in a data handler. A request from a domain object is received for a retrieval of a portion of the data in the database in operation 15806. The data retrieval mechanism is utilized in operation 15808 to retrieve the portion of the data from the database. The portion of the data is passed through the data handler to the domain object in operation 15810."* Column 275, Line 56); and a view context sub-system including at least one context object which is arranged to capture input and output data which populates the presentation objects of the view sub-system (i.e. *"The Client asks the Browsing Interface Proxy for the data associated with customer 1234. 6. The Browsing Interface Proxy forwards the request across the network to the Browsing Interface. 7. Same as*

6. 8. *The request is forwarded to the Customer Server. The Customer Server requests the customer data from the Database.* 9. *The Database returns the customer data for Customer 1234.* 10. *The Customer Server creates a structure and populates it with the customer data.* 11. *The Customer Structure is forwarded through the Browsing Interface, across the network and back to the Browsing Interface Proxy.* 12. *The Browsing Interface Proxy forwards the Customer Structure to the Client. The Client can now display the data in a UI for a user.*" Column 213, Line 34).

In regards to claim 3, Bowman-Amuah teaches a computer software system wherein: the view context sub-system also comprises data interfaces for the business logic sub-system (i.e. Figure 33, Elements 3300, 3302, and 3304).

In regards to claim 4, Bowman-Amuah teaches a computer software system wherein: the context objects included in the view context sub-system are updated when input is entered into the view sub-system by a user (i.e. "*an application may be designed to retrieve the tax rate for the State of Illinois. When the user enters "Illinois" on the screen, the application first validates the user's entry by checking for its existence on the "State Tax Table", and then retrieves the tax rate for Illinois. Note that codes tables provide an additional degree of flexibility. If the tax rates changes, the data simply needs to be updated; no application logic needs to be modified.*" Column 102, Line 33); and the context data objects are updated by the handler sub-system whenever business logic is executed on any of the context objects (i.e. "*FIG. 158 illustrates a flowchart for a method 15800 for controlling data. A data retrieval mechanism is provided in operation 15802 for retrieving data from a database. The*

*data retrieval mechanism also writes data to the database. In operation 15804, the data retrieval mechanism is encapsulated in a data handler. A request from a domain object is received for a retrieval of a portion of the data in the database in operation 15806. The data retrieval mechanism is utilized in operation 15808 to retrieve the portion of the data from the database. The portion of the data is passed through the data handler to the domain object in operation 15810.*" Column 275, Line 56).

In regards to claim 5, Bowman-Amuah teaches a computer software system wherein: the view sub-system refreshes the presentation objects with the input and output data from the view context sub-system (i.e. *"A retrieveData( ) message might also be required, if the object model pre-instantiates objects before retrieving them. Similarly, refresh( ) could be used: the business object, if dirty, replaces any changes with data originally from the data store."* Column 296, Line 13).

In regards to claim 6, Bowman-Amuah teaches a computer software system wherein: the view context sub-system is represented in a platform-independent format (i.e. *"The Directory service can organize network nodes to reflect the topology and organization of the enterprise and its policies. The Directory service makes resources location and platform independent, since it allows users to locate resources via the directory and regardless of their physical location. The Directory service also maps between logical resource names"* Column 62, Line 57).

In regards to claim 7, Bowman-Amuah teaches a computer program comprising: at least one view object comprising presentation objects which provide a user interface (i.e. Figure 42, "User Interface Component"); at least one business logic object

comprising business data objects and arranged to implement business functions (i.e.

*"Business Logic is the core of any application, providing the expression of business rules and procedures (e.g., the steps and rules that govern how a sales order is fulfilled). As such, the Business Logic includes the control structure that specifies the flow for processing business events and user requests. There are many ways in which to organize Business Logic, including: rules-based, object-oriented, components, structured programming, etc. however each of these techniques include, although perhaps not by name, the concepts of: Interface, Application Logic, and Data Abstraction. FIG. 33 depicts the various components of the Business Logic portion of the Netcentric Architecture Framework."* Column 119, Line 53); at least one handler

object which controls actions of at least one of the view objects and actions of at least one of the business objects (i.e. *"FIG. 158 illustrates a flowchart for a method 15800 for controlling data. A data retrieval mechanism is provided in operation 15802 for retrieving data from a database. The data retrieval mechanism also writes data to the database. In operation 15804, the data retrieval mechanism is encapsulated in a data handler. A request from a domain object is received for a retrieval of a portion of the data in the database in operation 15806. The data retrieval mechanism is utilized in operation 15808 to retrieve the portion of the data from the database. The portion of the data is passed through the data handler to the domain object in operation 15810."*

Column 275, Line 56); and at least one view context object comprising data objects which capture a state of at least one of the view objects (i.e. *"For instance, all of the constants used by a PhoneNumber object to capture the various types of PhoneNumber*

Art Unit: 2174

(i.e. home, business, fax, cell, pager, etc) can be accessed through a *PhoneTypeConstants* class." Column 203, Line 3).

In regards to claim 8, Bowman-Amuah teaches a computer program according wherein: each view context object is associated with a single view object; and the view context object is arranged to capture all data objects needed to populate the presentation objects of the associated view object at any one time (i.e. "*The Client asks the Browsing Interface Proxy for the data associated with customer 1234. 6. The Browsing Interface Proxy forwards the request across the network to the Browsing Interface. 7. Same as 6. 8. The request is forwarded to the Customer Server. The Customer Server requests the customer data from the Database. 9. The Database returns the customer data for Customer 1234. 10. The Customer Server creates a structure and populates it with the customer data. 11. The Customer Structure is forwarded through the Browsing Interface, across the network and back to the Browsing Interface Proxy. 12. The Browsing Interface Proxy forwards the Customer Structure to the Client. The Client can now display the data in a UI for a user.*" Column 213, Line 34).

In regards to claim 9, Bowman-Amuah teaches a computer program wherein: each view context object also comprises data interfaces for the business logic objects accessed in a use case in which the associated view participates (i.e. Figure 33, Elements 3300, 3302, and 3304).

In regards to claim 10, Bowman-Amuah teaches a computer wherein: the data objects associated with a view context object are updated when input is entered into the



associated view object by a user (i.e. *"an application may be designed to retrieve the tax rate for the State of Illinois. When the user enters "Illinois" on the screen, the application first validates the user's entry by checking for its existence on the "State Tax Table", and then retrieves the tax rate for Illinois. Note that codes tables provide an additional degree of flexibility. If the tax rates changes, the data simply needs to be updated; no application logic needs to be modified."* Column 102, Line 33); and data elements are updated by a handler object whenever business logic is executed on the data elements (i.e. *"FIG. 158 illustrates a flowchart for a method 15800 for controlling data. A data retrieval mechanism is provided in operation 15802 for retrieving data from a database. The data retrieval mechanism also writes data to the database. In operation 15804, the data retrieval mechanism is encapsulated in a data handler. A request from a domain object is received for a retrieval of a portion of the data in the database in operation 15806. The data retrieval mechanism is utilized in operation 15808 to retrieve the portion of the data from the database. The portion of the data is passed through the data handler to the domain object in operation 15810."* Column 275, Line 56).

In regards to claim 11, Bowman-Amuah teaches a computer program wherein: the view object associated with a view context object is refreshed with the data objects associated with a view context object (i.e. *"A retrieveData( ) message might also be required, if the object model pre-instantiates objects before retrieving them. Similarly, refresh( ) could be used: the business object, if dirty, replaces any changes with data originally from the data store."* Column 296, Line 13).

In regards to claim 12, Bowman-Amuah teaches a computer program according wherein: the at least one view context object is represented in a separate platform-independent format (i.e. *"The Directory service can organize network nodes to reflect the topology and organization of the enterprise and its policies. The Directory service makes resources location and platform independent, since it allows users to locate resources via the directory and regardless of their physical location. The Directory service also maps between logical resource names"* Column 62, Line 57).

In regards to claim 17, Bowman-Amuah teaches a computer program according to claim 7, wherein the at least one handler object consists of a plurality of handler objects (i.e. *"Data handlers can be physically partitioned into a separate component from the business logic. For example, the data handler could be on a data server component near the DB, while the business logic is in an application component. Multiple Data Handlers. Different strategies can be implemented based upon specific requirements. For example, on the client we can use serialization to communicate with the server; whereas the server can use standard DB access to communicate with DB."* Column 276, Line 58).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blackman (US 6665573) in view of Bowman-Amuah (US 6636242).

In regards to claim 13, Blackman teaches a method of passing data in an object oriented application having at least one handler object, the method comprising the steps of: creating a view object with the handler object (i.e. Figure 3, Element 363), creating a view context object with the view object (i.e. Figure 3, Element 366); passing the view context object to the handler object (i.e. Figure 3, Elements 363 and 366, the double arrows indicate that information is passed between the two objects); updating the view context object with the handler object (i.e. Figure 3, Elements 363 and 366, the double arrows indicate that information is passed between the two objects and that it is updated after it is passed). Blackman does not specifically teach refreshing the view object from the updated view context object. Bowman-Amuah teaches (i.e. "A *retrieveData()* message might also be required, if the object model pre-instantiates objects before retrieving them. Similarly, *refresh()* could be used: the business object, if dirty, replaces any changes with data originally from the data store." Column 296, Line 13). It

Art Unit: 2174

would have been obvious to one of ordinary skill in the art at the time of the invention to modify Blackman with the teachings of Bowman-Amuah and include a method of refreshing the view object with the motivation to provide the user with the most up to date information.

In regards to claim 14, Blackman and Bowman-Amuah teach all the limitations of claim 13. Blackman further teaches a method wherein updating step comprises a business method call by the handler object in response to an event triggered by the view object and to the view context object (i.e. *"Next, in block 913, a first loop is initiated for each image contained in the jobspec file 550. In block 916, an image content object 386 (FIG. 3D) for the current image identified within the jobspec file 550. Thereafter, in block 919, the add image content method 463 (FIG. 3C) in the LCE object 383 is called to include the newly created image content object 386 into the LCE object 383."* Column 17, Line 6).

In regards to claim 15, Blackman and Bowman-Amuah teach all the limitations of claim 13. Blackman does not teach a method wherein the refreshing step comprises refreshing the view object in accordance with the action information from the event. Bowman-Amuah teaches a method wherein the refreshing step comprises refreshing the view object in accordance with the action information from the event (i.e. *"A retrieveData( ) message might also be required, if the object model pre-instantiates objects before retrieving them. Similarly, refresh( ) could be used: the business object, if dirty, replaces any changes with data originally from the data store."* Column 296, Line 13).

In regards to claim 16, Blackman and Bowman-Amuah teach all the limitations of claim 13. Blackman does not teach passing the view context object from the handler object to a second handler object; modifying the view context object by the second handler object; and passing the modified view context object from the second handler object to the handler object. Bowman-Amuah teaches, *"Data handlers can be physically partitioned into a separate component from the business logic. For example, the data handler could be on a data server component near the DB, while the business logic is in an application component. Multiple Data Handlers. Different strategies can be implemented based upon specific requirements. For example, on the client we can use serialization to communicate with the server; whereas the server can use standard DB access to communicate with DB."* (Column 276, Line 58). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Blackman with the teachings of Bowman-Amuah and include a method to have multiple handlers modifying the view context with the motivation to provide a more robust system (Bowman-Amuah, Column 2, Line 9).

### ***Response to Arguments***

Applicant's arguments, see pages 8-11, filed 10/27/2004, with respect to the rejection(s) of claim(s) 13 under Section 35 USC 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Blackman (US 6665573).

Applicant's arguments filed 10/27/2004 regarding claims 1-12 have been fully considered but they are not persuasive.

The applicant argues:

- a. Bowman-Amuah does not teach the feature "a handler sub-system including controller objects which control a sequence of actions by the business logic sub-system in a use case, in response to an event triggered by the view sub-system".
- b. Bowman-Amuah does not teach the feature: "a view context sub-system including at least one context object which is arranged to capture input and output data which populates the presentation objects of the view sub-system".
- c. Bowman-Amuah does not teach the feature: "at least one handler object which controls actions of at least one of the view objects and actions of at least one of the business objects".
- d. Bowman-Amuah does not teach the feature: "at least one view context object comprising data objects which capture a state of at least one of the view objects".

In regards to argument (a), the Examiner disagrees with the Applicant. The Examiner points out (i.e. *"FIG. 158 illustrates a flowchart for a method 15800 for controlling data. A data retrieval mechanism is provided in operation 15802 for retrieving data from a database. The data retrieval mechanism also writes data to the database. In operation 15804, the data retrieval mechanism is encapsulated in a data handler. A request from a domain object is received for a retrieval of a portion of the data in the database in operation 15806. The data retrieval mechanism is utilized in*

*operation 15808 to retrieve the portion of the data from the database. The portion of the data is passed through the data handler to the domain object in operation 15810."*

Column 275, Line 56) for the teaching of this particular feature.

In regards to argument (b), the Examiner disagrees with the Applicant. The Examiner points out (i.e. *"The Client asks the Browsing Interface Proxy for the data associated with customer 1234. 6. The Browsing Interface Proxy forwards the request across the network to the Browsing Interface. 7. Same as 6. 8. The request is forwarded to the Customer Server. The Customer Server requests the customer data from the Database. 9. The Database returns the customer data for Customer 1234. 10. The Customer Server creates a structure and populates it with the customer data. 11. The Customer Structure is forwarded through the Browsing Interface, across the network and back to the Browsing Interface Proxy. 12. The Browsing Interface Proxy forwards the Customer Structure to the Client. The Client can now display the data in a UI for a user."* Column 213, Line 34) for the teaching of this particular feature.

In regards to argument (c), the Examiner disagrees with the Applicant. Bowman-Amuah teaches, *"FIG. 158 illustrates a flowchart for a method 15800 for controlling data. A data retrieval mechanism is provided in operation 15802 for retrieving data from a database. The data retrieval mechanism also writes data to the database. In operation 15804, the data retrieval mechanism is encapsulated in a data handler. A request from a domain object is received for a retrieval of a portion of the data in the database in operation 15806. The data retrieval mechanism is utilized in operation 15808 to retrieve the portion of the data from the database. The portion of the data is*

*passed through the data handler to the domain object in operation 15810.*" (Column 275, Line 56). Since the data handler retrieves data as part of the view object and as part of the business object.

In regards to argument (d), the Examiner disagrees with the Applicant. The Examiner points out (i.e. *"For instance, all of the constants used by a PhoneNumber object to capture the various types of PhoneNumber (i.e. home, business, fax, cell, pager, etc) can be accessed through a PhoneTypeConstants class."* Column 203, Line 3) for the teaching of this particular feature. The phone numbers are captured when viewed.

### ***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Boris Pesin whose telephone number is (571) 272-4070. The examiner can normally be reached on Monday-Friday except every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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